

### ABSTRACT OF THE INVENTION

This is a surgical device usually delivered through an intravascular catheter. It may be used in several ways. It may, for instance, be used to open a clear passageway adjacent thrombus to allow both blood and medication to bypass the clot. It may be used to pierce and to remove thrombus. These thrombus are often found in tortuous vasculature. The device includes several sections. The device has a core element, typically a core wire. Placed around the distal end of the core element is a collapsible but preferably self expanding proximal cage assembly and a distal filter, preferably a self-expanding cage assembly or other filter component. The various portions of those components are preferably radio-opaque. The proximal end of the proximal cage is typically is affixed to an actuator in such a way as to allow expansion of the cage after deployment. The proximal cage assembly may be used for collecting emboli or for displacing them to allow blood flow to resume, either with or without concurrent clot-dissolving drug treatment. The distal sector, whether a self-expanding cage or fan, is placed distally of the thrombus to collect portions of the thrombus which may loosen during the treatment or removal procedure.